

Memorandum

TO: HONORABLE MAYOR AND
CITY COUNCIL

FROM: John D. Bjurman
Chief Information Officer

**SUBJECT: WIRELESS INTERNET (WIFI)
SYSTEMS**

DATE: October 19, 2005

Approved

Ray Winer

Date

10/19/05

RECOMMENDATION

It is recommended that the City Council:

- 1) Approve the Wireless Internet System (WiFi) strategy framework as adopted by the Information Technology Planning Board at its September 15, 2005 meeting.
- 2) Authorize the City Manager to proceed with a Request for Proposal (RFP) for an Expanded Wireless Internet System (WiFi) for the core areas of Downtown San Jose.

BACKGROUND

The Mayor's June 2003 Budget Message directed staff to jointly develop a program to create WiFi "hot spots" in the Downtown area. Based on that directive, a WiFi pilot project was installed in three outdoor locations in the Downtown core: San Pedro Square, Plaza de Cesar Chavez, and the Circle of the Palms. This system has been operating since March of 2004, with an average of 75 users per day. The City and the Convention and Visitors Bureau partnered with a pro bono provider to design and operate the current system.

The Mayor's March 2005 Budget Message directed staff to study and present recommendations for implementing an expanded WiFi "hot zone" in the Downtown area and to present a strategy framework for WiFi implementations Citywide.

A staff WiFi policy team, with membership from multiple City Service Areas, was established to develop a strategy framework and set of initiatives to use WiFi to advance the following policy goals: 1) economic development; 2) enhanced delivery of City services; 3) bridging "the digital divide" in internet access for all residents of San Jose.

In order to create a credible WiFi strategy framework, the team solicited input from internal and external stakeholders with the assistance of a telecommunications consultant. Stakeholders included: Library, Parks and Recreation, media specialists and opinion leaders, municipal field workers, Downtown businesses, Neighborhood Business Districts, the Airport, legacy broadband providers (SBC, Comcast, etc.) and Wireless Internet Providers. The consultant reported a high

level of support amongst the stakeholders to a) install WiFi systems in the City's libraries, community and homework centers, and b) to expand the Downtown WiFi project to include outdoor areas in the Downtown Core and Guadalupe Parkway. The stakeholder input also indicated that there was a significant negative reaction to the option of the City providing ubiquitous WiFi over the entire City

Additionally, the Information Technology Department conducted its own research effort that resulted in the following conclusions:

- WiFi is a well-established technology that is relatively inexpensive with a wide choice of equipment that operates via unlicensed radio frequencies. WiFi has proved to be both reliable and cost effective.
- Municipalities across the country have been utilizing and enabling WiFi networks since the late 1990s. San Jose's initial Downtown pilot has been eclipsed by more comprehensive, larger-scale approaches in other peer cities nationally.
- Most jurisdictions make their WiFi systems inside City owned facilities, in the streets, sidewalks, and parks available for free to City employees, residents, businesses and visitors.
- There is opportunity for the City to cultivate partnerships to financially support WiFi projects.
- WiFi systems are becoming a critical infrastructure to support large-scale events such as the Zero-One San Jose Festival (August 2006), the Grand Prix (July 2005) and the 2006 Grand Prix.

ANALYSIS

WiFi Strategy and Framework

Based on the stakeholder input and the research conducted by the IT Department, a strategy framework was developed, presented and unanimously approved by the Information Technology Planning Board (ITPB) on September 15, 2005. The statement included recommendations to move forward with WiFi implementations in the City's Libraries and Community Centers and to expand the Downtown WiFi system (see Attachment A for WiFi Policy Statement approved by the ITPB on September 15, 2005).

Request For Proposal (RFP)

In order to proceed with expansion of the WiFi zone downtown, an RFP will be issued for requirements and cost of project installation. In order to thoroughly examine cost saving alternatives, the RFP will include options that allow proposers to use existing City infrastructure such as streetlight poles, signal poles, rooftop access and similar locations. The intent is to allow cost saving ideas to be presented through the RFP process. The final decision will be based on the proposal that best meets the needs of the City. It is anticipated that ITD and Finance would issue the RFP by the end of December 2005 and a vendor selected by January 2006.

Benefits

Expanded Downtown Outdoor WiFi

There are two primary drivers for the immediate installation of the expanded Downtown WiFi system.

1. The Zero-One arts and technology festival is scheduled for August 2006 in Downtown San Jose. A key component of this festival is artist and community engagement projects about "the interactive city" that merge media, technology and the arts. A WiFi system provides a critical infrastructure component for the success of this festival.
2. The equipment being installed in the Downtown area by the Department of Transportation will ease congestion and facilitate the efficient flow of vehicular and pedestrian traffic, as well as access to City parking lots and garages during major events in downtown such as Grand Prix, the Zero-One Festival, the San Jose America Festival, the San Jose Jazz festival, Tapestry and Talent and others. The Department of Transportation will be installing equipment that includes a system of thirteen automated directional signs, known as Parking Guidance Systems (PGS) Phase II. These signs need to have secure communication to the City's data network to update the directional and way-finding information that will appear on the signs. Connecting these signs via secure wireless communications on the proposed expanded Downtown WiFi network can be accomplished at a greatly reduced cost and has the added benefit of not requiring excavation of streets and sidewalks in thirteen downtown locations in the months before the major events.

In addition to the Zero-One and PGS Phase II needs, this WiFi system will be available to residents, visitors, businesses, and City staff on an on-going basis. In the future, the system can provide a communications infrastructure for many additional public and private uses. Technologies that could be supported include: handheld devices and laptops, WiFi phones, WiFi enabled parking meters that accept credit and debit cards, and WiFi traffic cameras. The City will be better able to implement any of these systems when a downtown WiFi system is completed.

WiFi in Libraries and Community Centers

The Information Technology Planning Board also approved pilot projects for WiFi implementations in the City's neighborhoods. Both the Library and Parks, Recreation and Neighborhood Services Department will be moving forward with additional WiFi systems in branch libraries and community centers as funding is identified. These systems will be dispersed throughout the City and installed with the goal of providing free access to WiFi hotspots for residents.

As we look to the future, staff continues to focus on additional opportunities as they arise. Working with the Silicon Valley Joint Venture, staff is exploring bringing a regional solution to Citywide ubiquitous WiFi coverage. Additional efforts are continuing in cooperation with San Jose State University on providing WiFi service that improves the coverage of each agency's systems.

OUTCOMES

Completion of this project as described in this memo will enhance the delivery of City services, enhance economic development opportunities, and help to bridge the digital divide for all residents of San Jose.

PUBLIC OUTREACH

An outside consultant was contracted to conduct Stakeholder interviews and survey the opinions of the following groups and members of the public: Library, Parks and Recreation, media specialists and opinion leaders, municipal field workers, Downtown businesses, Neighborhood Business Districts, the Airport, legacy broadband providers (SBC, Comcast, etc.) and Wireless Internet Providers.

COORDINATION

This memorandum has been coordinated with the Information Technology Department, Department of Transportation, Finance Department, the Office of the City Attorney, the Office of Economic Development, and the Redevelopment Agency.

COST IMPLICATIONS

The budget for the capital portion of the Expanded Downtown WiFi project is estimated to be under \$100,000. This funding will be split between the General Purpose Parking Fund and the Redevelopment Agency. Appropriated funds from the General Purpose Fund are indicated below in the Budget Reference Section. The Redevelopment Agency will provide funding up to \$50,000 after the first \$50,000 funding from the General Purpose Parking Fund is expensed.

It is estimated that an additional \$60,000 per year will be required to fund the ongoing maintenance and telecommunications fees associated with this project. Of this amount, \$18,000 will be funded by the General Purpose Parking Fund (Fund 533). The remaining \$42,000 will be addressed during the annual budget process. The RFP for the Expanded Downtown WiFi network will encourage providers to propose models that reduce direct costs to the City.

BUDGET REFERENCE

Fund #	Appn. #	Appn. Name	RC#	Total Appn.	Amount for Contract	2005-2006 Proposed Capital Budget Page
533	5732	Parking Guidance System	51-113533	\$350,000*	\$100,000	V-790

- An upward adjustment of \$100,000 is recommended in the 2004-2005 Annual Report. The 2004-2005 Annual Report will be considered by the City Council on October 18, 2005.

CEQA

Not a project.



JOHN D. BJURMAN
Chief Information Officer

Attachment A: WiFi Strategy Framework (Policy Statement)
approved by ITPB on September 15, 2005
Attachment B: Proposed Downtown WiFi Expansion Map

Attachment A

City of San Jose – WIFI Policy Statement As Submitted to the Information Technology Planning Board September 15, 2005

A RESOLUTION REQUESTING THE AUTHORIZATION OF A PILOT PROJECT FOR A WIRELESS FIDELITY (WIFI) SYSTEM IN LIMITED GEOGRAPHIC AREAS OF THE CITY OF SAN JOSE AND ACKNOWLEDGING THE COMMITMENT TO INCLUDE A PLAN TO PROVIDE COORDINATED CITY WIDE WIRELESS FIDELITY (WIFI) SYSTEMS AS A PART OF THE IMPLEMENTATION OF THE INFORMATION TECHNOLOGY DEPARTMENT'S and CSA's 05-06 and 06-07 MASTERPLANS.

WHEREAS, the Mayor's March 2005 Budget Message requested an update on WIFI opportunities and strategies for the City of San Jose; and,

WHEREAS, municipalities across the country have been utilizing WIFI technology since the late 1990s; and,

WHEREAS, a WIFI system beta test will make wireless high speed internet connectivity openly available to the City, its residents, businesses, and visitors inside City owned facilities, in the streets, sidewalks and parks within the beta test area for free; and,

WHEREAS, a goal of a WIFI implementation in the City of San Jose is to increase economic development; and,

WHEREAS, a goal of a WIFI implementation in the City of San Jose is to enhance delivery of City services; and,

WHEREAS, a goal of a WIFI implementation in the City of San Jose is to assist in bridging "the digital divide" for all Citizens of San Jose; and,

WHEREAS, WIFI is a well established technology that is relatively inexpensive with a wide choice of equipment that operates via unlicensed radio frequencies; and,

WHEREAS, because of its potential positive impact on the City of San Jose, this project would be ideal for the City to cultivate public-private partnerships to financially support this project via the efforts of the City Managers Office's Revenue Generation Team.

WHEREAS, the Information Technology Department has formally surveyed our key internal and external WIFI stakeholders; and,

WHEREAS, the input from our key project stakeholders strongly support the immediate installation of free WIFI hot-spot pilot system in the City's Libraries as cost effective and compatible with the overall WIFI goals; and,

WHEREAS, the input from our key project stakeholders strongly support the immediate installation of free WIFI hot-spot pilot system in the City's Community Centers and Parks and Recreation Facilities as cost effective and compatible with the overall WIFI goals; and,

WHEREAS, the input from our key project stakeholders support the continuing effort towards the expansion of free WIFI hot-spots in the City's Downtown Core, Central Business and Cultural districts as cost effective and compatible with the overall WIFI goals including the WIFI systems necessary to support large scale downtown events such as the 2006 Zero-One Festival and 2006 Grand Prix.

NOW, THEREFORE BE IT RESOLVED THAT THE CITY OF SAN JOSE'S INFORMATION TECHNOLOGY PLANNING BOARD; the immediate installation and implementation of WIFI hot spots in City's Libraries and Parks and Recreational Facilities and the prioritization of an increased effort to expand the Downtown WIFI zone.

BE IT FURTHER RESOLVED, that the ITPB approves the inclusion of a plan for the financing, installation, implementation, and maintenance of WIFI systems in the City's Libraries and Parks and Recreational Facilities and an expansion of the Downtown WIFI zone as part of the Technology Masterplans for the appropriate CSAs.

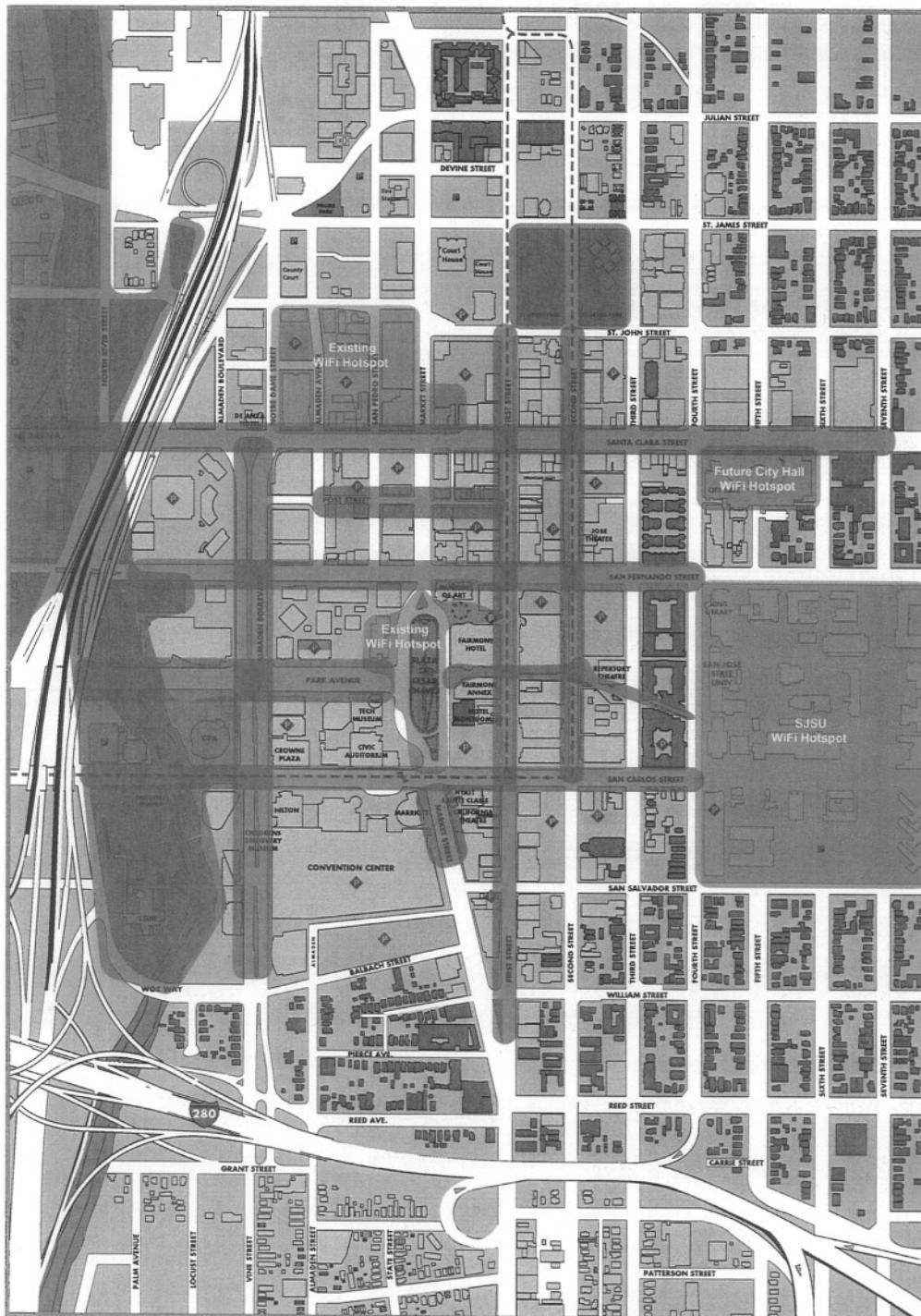
BE IT FURTHER RESOLVED, that the plan shall include information on the potential economic benefits to the City and the costs for installing, implementing and maintaining the system as well as any cost recovery options as identified by the CMO's Revenue Generation Team.

BE IT FINALLY RESOLVED, that the WIFI sections of the CSA's technology masterplans shall be presented to the ITPB for further review no later than January 2006.

ATTACHMENT B

Downtown San Jose WiFi

Proposed Hotspot Expansion



■ Proposed Outdoor WiFi Expansion: Critical Areas ■ Existing WiFi Hotspots ■ Fee For Service WiFi

The goal of the Free Downtown WiFi service is outdoor coverage throughout the Downtown core area. Highlighted areas are critical, must-cover areas, and include key gathering places and thoroughfares.